

REVIEW

Drunken patients in the general hospital: their care and management

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In Britain alcohol consumption is increasing, 1 in 4 men and 1 in 10 women drink hazardously, 1 in 3 young men, and 1 in 4 young women regularly binge drink. Mortality rates attributable to alcohol have doubled; with 1 in 5 male inpatients having an alcohol related problem. The increasing problem of managing drunken behaviour in accident and emergency departments is discussed. Although an alcohol history is recommended for all admissions, because of various reasons, hazardous drinkers continue to miss the opportunity of effective interventions. In addition to the more formal treatments for alcohol problems, there is a wealth of evidence reporting the effectiveness of brief interventions carried out by a range of health professionals can lead to long term reductions in alcohol consumption. This review discusses practical and legal issues of the assessment, screening tools, and management of intoxicated patients.

Alcohol consumption by the average British adult has increased considerably over the past 30 years and is estimated to have increased by two to three litres of pure alcohol per person, per year.^{1,2} In comparison, alcohol consumption in other European countries is falling.³

It is estimated that the total cost of alcohol misuse in Britain is £20 billion a year⁴; this includes costs to the NHS of £1.7 billion and alcohol related crime of £7.3 billion.⁵ This increasing alcohol consumption and costs has negative ramifications on the person and society, which on the whole has to be managed by the health system and the criminal justice system. The government recently published its national alcohol strategy, of the 41 item action plan only six were allocated to the alcohol industry and none were mandatory.⁴

EFFECT ON THE HEALTH SYSTEM

Rates of alcohol related disorder and misuse vary depending on which population is sampled and how the disorder is classified (table 1).

In Britain 1 in 25 adults is alcohol dependent.⁷ 1 in 4 men and 1 in 10 women drink hazardously, 1 in 3 young men and 1 in 4 young women regularly binge drink.⁸ Men who drink more than three to four units a day and women who drink more than two to three units a day have an increased risk of ill health.⁹ Britain's mortality rates for deaths related to alcohol

consumption have more than doubled over the past 20 years to 5500 in 2000¹⁰ and these are only the deaths directly attributable to alcohol—that is, alcohol is mentioned on the death certificate. Alcohol is implicated in up to 33 000 deaths per year in Britain.¹¹ Increasing alcohol misuse in adolescents is predicted to contribute to future record levels of obesity and infertility.¹²

About one in five male inpatients have alcohol related problems.¹³ In a study by Hearne *et al* 30% of male, and 8% of female inpatients fulfilled DSM IV criteria for alcohol misuse or dependence.¹⁴

It has been found that with higher levels of alcohol consumption the number of visits to accident and emergency (A&E) increases, while the number of visits to GPs decrease.¹⁵ It may not be surprising then that up to 29% of all attendances to A&E are alcohol related^{16,17} and this rises to 8 of 10 at peak times.¹⁸ Half of all seriously injured patients admitted via A&E have alcohol related injuries.¹⁹ In a survey of psychiatric emergency services the prevalence of alcohol dependence was 37.5%.²⁰

Around 90% of senior A&E staff believe that alcohol misuse is one of the most serious public health problems facing Britain; 99% of A&E staff have been victim of physical or verbal abuse from drunken patients. Almost 80% of A&E consultants say they do not have the staff, training, or other resources to deal with the massive impact of alcohol misuse, believing the government needs to do more.²¹

EFFECTS ON SOCIETY

Drunkenness offences are increasing in Britain in parallel with rising consumption levels²² and in particular violent assaults and the number of people being attacked by drunken strangers.³ Industry is affected by sickness absence, reduced productivity, unemployment, and premature death. In addition to the costs of society's response to alcohol problems, alcohol produces other costs via road traffic accidents and agencies such as social services from alcohol related issues like family disputes and child neglect. Yet still there are the costs of emotional pain and suffering from alcohol related problems.²²

EFFECTS ON THE PERSON

Alcohol when misused can affect almost any system in the body. Box 1 summarises the physical effects, both acute and chronic.

Psychiatric effects

These overlap with many of the central nervous system effects in box 1. In addition during intoxication and withdrawal a series of intense

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Box 1 Physical effects of alcohol

Central nervous system

Alcoholic dementia

- Blackouts (anterograde amnesia)
- Central pontine myelinosis
- Cerebellar degeneration
- Epilepsy
- Marchiafava-Bignami syndrome
- Polyneuropathy
- Sleep impairment (fragmentation with reduced REM and stage 4 sleep)
- Wernicke-Korsakoff syndrome (amnesic syndrome)
- Withdrawal and delirium tremens

Muscles

- Acute or chronic myopathy

Cardiovascular system

- Beriberi heart disease
- Cardiac arrhythmias
- Cardiomyopathy
- Hypertension

Metabolism

- Hyperlipidaemia
- Hyperuricaemia
- Hypoglycaemia
- Obesity

Endocrine system

- Pseudo-Cushings syndrome

Respiratory system

- Chest infections

Gastrointestinal system

- Acute gastritis
- Carcinoma of mouth, oesophagus, or large bowel
- Liver disease
- Pancreatic disease

Haemopoiesis

- Macrocytosis (due to direct toxicity or folate deficiency)
- Thrombocytopenia
- Leucopenia

Bone

- Osteoporosis
- Osteomalacia

Adapted from Kumar and Clarke, *Clinical Medicine*²³

psychiatric symptoms can be observed such as depressed mood, severe anxiety, and psychosis. These symptoms often mimic psychiatric disorders but are likely to disappear within weeks of abstinence. Alcohol misuse is associated with anxiety and mood disorders, these can precede the alcohol misuse or develop afterwards. It is rare for the patient to recognise the link between alcohol and their depression or anxiety with most being in denial regarding their alcohol misuse.

Alcoholic hallucinosis is a rare condition in which auditory hallucinations are present in clear consciousness and without autonomic over-activity, usually in a person who has been drinking excessively for many years. Alcoholic hallucinosis is classified as a substance induced psychotic disorder, the hallucinations usually respond rapidly to antipsychotic medication provided the person remains abstinent.

Alcohol withdrawal

In an alcohol dependent person, when alcohol is completely withdrawn, or substantially reduced, a characteristic withdrawal syndrome can develop. The neurobiological basis for withdrawal is up regulation *N*-methyl-D-aspartate receptors and rebound excitatory action of the glutamate system.²⁴ This results in autonomic hyperactivity such as sweating, tachycardia, hypertension, tremor, insomnia, anxiety, nausea, vomiting, and diarrhoea. Symptoms generally occur between 6 to 12 hours after the last drink and may last for up to four to five days. Withdrawal may be complicated by generalised tonic-clonic seizures ("rum fits"). In about 30% of cases the seizures are followed by delirium tremens. In delirium tremens the symptoms of alcohol withdrawal is accompanied by delirium, which includes misinterpretation of sensory stimuli and hallucinations. These misinterpretations and hallucinations are usually visual but auditory and somatic hallucinations can occur. Treatment of alcohol withdrawal is adequate dampening down of the glutamate response, usually with a benzodiazepine. If the patient has a history of withdrawal seizures then an anticonvulsant could be started a few days before the cessation of alcohol. If the patient does have a seizure during withdrawal then usual treatment is a stat dose of diazepam (10 to 20 mg during or just after the seizure) and to increase their regular benzodiazepine further. Delirium tremens is treated by increasing their regular benzodiazepine dose, consideration of an antipsychotic, and possibly transfer to a more secure environment. Thiamine replacement is required for all patients in withdrawal (50 mg three times a day for two to three weeks). Any patient who shows any sign of Wernickes encephalopathy must be given immediate parenteral B vitamins without waiting for the triad of symptoms (confusion, ataxia, ophthalmoplegia and nystagmus).²⁵

SCREENING

Research has shown that without structured screening questionnaires alcohol problems are commonly missed.²⁶ There have been a number of studies examining different ways of screening patients attending general hospital for alcohol problems. These have often been linked with studies of brief intervention. A study in Manchester²⁷ using the CAGE—four item alcohol screening questionnaire—and a clinical assessment identified 28% of patients as having an alcohol related attendance at the emergency department. Other studies^{28–29} have found 24%–31% of emergency department patients scoring 2 or more on the CAGE questionnaire. A study of young adults aged 18–29 years in West Virginia³⁰ used the 10 item alcohol use disorder's identification test (AUDIT) and screened 48% as positive for alcohol problems with 91% of these within the mild to moderate range. A comparison of screening for alcohol misuse in under age drinkers in Pittsburgh found the AUDIT performed better than the CAGE or TWEAK.³¹

Soderstrom *et al* screened over 1100 patients in Baltimore using a structured clinical interview to identifying lifetime alcohol dependence in 35.5% and misuse in a further 8%. They compared this "gold standard" diagnosis with other screening tools; the CAGE, AUDIT, and brief Michigan alcoholism screening test. They found the CAGE the best

Table 1 Definitions

Hazardous drinker	Man who drinks 21 units or more, woman 14 or more, per week. Also called an at risk drinker.
Binge drinker	Man who regularly drinks 10 or more units, woman 7 or more, in a single session.
Very heavy drinker	Man who drinks 50 units or more, woman 35 or more, per week.
Harmful use	Identifiable damage to health, either physical or mental, attributable to alcohol. Pattern of use has persisted for at least one month or occurred repeatedly within a one year period. ⁶ Also called a problem drinker
Dependence	Three or more (of the following six) manifestations, occurring together for at least one month or occurred repeatedly within a one year period. Compulsion to drink, lack of control, withdrawal state, tolerance, salience, and persistence use. ⁶

predicator of lifetime alcohol dependence with a sensitivity of 84% and specificity of 90%.³²

Our review of the literature shows that the CAGE is the most widely used instrument for screening and that a combination of the CAGE and routine clinical assessment should be used to identify alcohol problems in patients attending the emergency department (see box 2).

MANAGEMENT OF DRUNKENNESS

Assessment of level of intoxication

The gold standard measure is the blood alcohol concentration (BAC), which should be compared with the presentation of the drunk patient and can be performed serially to help decide if the presentation may be secondary to alcohol or not. Breath alcohol meters are a quick and reliable method of estimating BACs.

The level of intoxication can be estimated by the patient's presentation (table 2) but is influenced by a number of variables and a measure of blood or breath alcohol should always be attempted. Part of the assessment should include consideration of differential diagnosis of changed mental state in the acutely intoxicated patient.

Assessment of mental state

It is often not possible to accurately assess the "underlying mental state" of an intoxicated patient. It is recommended that if there are concerns that the patient be allowed to sober up and reassessed. This poses practical problems such as supervision, management of intoxicated behaviour, and management if the patient wishes to leave. The authors recommend that the patient is placed in an area where they can be observed.

Despite it being difficult to assess the mental state of the intoxicated patient, alcoholism is associated and commonly coexists with other psychiatric disorders. Experimentally alcohol has been shown to induce depression, suicidal

ideation, and anxiety in alcoholics.^{34–36} In two thirds of alcoholics at least one additional psychiatric diagnosis may be made³⁷; most commonly depressive disorders, neurosis, and antisocial personality disorder.

Comorbid depression is more common in women with alcohol problems, prospective studies suggest that the onset of alcoholism usually antedates the onset of depression. Schuckit³⁸ concludes "For about 90% of men and women who have symptoms of alcoholism and depression together, the diagnosis is alcoholism, not affective disorder." The depressive symptoms usually remit with continued abstinence, but complete resolution may take months or even years.³³

This evidence leads to the practice that the patient with alcohol problems and depression is detoxified first and the depressive symptoms are reassessed after three to six weeks of abstinence.³⁹

Alcohol is associated with increased rates of deliberate self harm and suicide, with a quarter of alcoholics attempting suicide at some point⁴⁰ and the suicide rate in those with alcohol misuse or dependence is increased up to eightfold.⁴¹

Management of intoxication and injuries

The temptation to minimise issues in pleasantly drunken patients or rapidly discharge unruly ones must be avoided. Alcohol is associated with trauma⁴² and serial BACs can help differentiate what may be attributable to alcohol. The acute management of alcohol poisoning usually includes the correction of the hypoglycaemia and acidosis and may require haemodialysis. Metadoxine has been trialled as an adjunctive treatment.⁴³

Behavioural management of the drunken behaviour

Ingestion of alcohol causes disinhibition, impairs comprehension, attention and concentration and memory resulting in distractibility, inappropriate behaviour, for example, irritability, suspiciousness, and aggression. This effect is dose

Table 2 Effects of different blood alcohol concentrations in non-dependent people

Blood alcohol concentration (mg of alcohol/100 ml of blood)	Effect
20–30 mg/100 ml 50 mg/100 ml 60–100 mg/100 ml	slight increase in talkativeness, relaxation. impairment in some tasks requiring skill. very talkative; louder speech acts and feels self confident, less cautious and inhibited as usual. Slowed reaction time.
80 mg/100 ml = current legal limit for driving. 200 mg/100 ml	Sedated rather than active. Impairment now includes slurred speech, clumsiness, reduced responsiveness, and considerable intellectual impairment. Amnesia.
300–400 mg/100 ml	Semiconscious or unconscious. Body functions are beginning to break down. Fatalities occur at and these concentrations.

Adapted from Hulse *et al.*³³

Box 2 CAGE questionnaire

- Have you ever thought you ought to Cut down on your drinking? **Cut down**
- Have people ever Annoyed you by criticising your drinking? **Annoyed**
- Have you ever felt bad or Guilty about your drinking? **Guilty**
- Have you ever had a drink in the morning to steady your nerves or get over a hangover? **Eye opener**

related and more pronounced when the alcohol concentration is increasing.⁴⁴

After the assessment and treatment of injuries the following general principles should be followed (box 3). There are also specific behavioural techniques based on common sense and clear communication, which can be used flexibly (box 4).

Management of the alcohol problem

Effectiveness of interventions for alcohol misuse and dependency to a large extent is dependent on the motivation of the person. From this viewpoint motivational interviewing⁴⁶ and opportunistic brief interventions have evolved.

Detoxification and specialist alcohol rehabilitation remain the mainstay of treatment for those who are alcohol dependent.⁴⁷ However, brief interventions focusing on reasons and motivation to change the pattern of drinking are recommended for hazardous drinkers and those severely dependent if they will not attend specialist alcohol appointments.³⁹ The essential ingredients of brief interventions can be summarised under the acronym FRAMES (box 5).⁴⁸

Brief interventions are highly cost effective,⁴⁹ focusing on the more numerous “middle range” of drinkers, preventing further damage to society than attending to alcoholics only.⁵⁰ The effectiveness of brief interventions is well reported with numerous high quality randomised controlled trials included in systematic reviews and meta-analysis.^{48 51–56} These reviews report on the effectiveness of brief interventions over a range of settings in the general hospital including emergency departments.⁵⁶ Moreover effectiveness is shown in hazardous,

Box 3 General principles, when managing drunkenness

- Attitude to the intoxicated patient is important, a combination of calm, professional, and non-judgemental have been suggested as has a friendly attitude^{44 45}
- Try and seek collateral information from an informant, do not rely solely on the history from the intoxicated patient.
- Orientate and establish rapport, communicating clearly, slowly, and simply.
- Allocate a single health worker
- Low level of external stimuli, placed away from busy/noisy areas, reducing the possibility of further accidents.
- Written discharge instructions and preferably into the responsibility of a sober adult.
- Avoid belittling or provoking the patient, this can be done consciously or unconsciously.

Box 4 Specific behavioural techniques for managing drunkenness

- Pacing: pace the interaction at the intoxicated patient's level of cognitive impairment.
- Key words: key words may be all that is recognised by the intoxicated patient, therefore avoid negative key words (don't fight us) and use positive ones (let's be friends).
- Humour: depends on the staff's personality, try it but stop if patient responds negatively as it can also backfire.
- Distraction: useful at impasses and with higher levels of intoxication.
- Stop and go: style of interacting whereby you stop positive interaction at the point of unwanted behaviour, deliver a terse message, but return immediately to the friendly, positive interaction.
- Contingency contracting: tell the patient what they need to do and what and when they will get as a result.
- Withdraw/time out: staff withdraws and returns later, can help at impasses and enables staff to compose themselves.

heavy, and dependent drinkers. It is encouraging that even five minute interventions are effective.⁵⁷

Although a recent meta-analysis questions the evidence of effectiveness in the general hospital setting,⁵⁸ RCTs continue to be produced showing the benefits of just a single session of motivational interviewing. Mcmanus *et al*⁴⁷ randomised 170 consecutive medical admissions, which drank very heavily (men drinking more than 50 unit/week and women drinking more than 35 unit/week) to no intervention, one session, or two sessions of counselling. At six months follow up the median reduction in alcohol use was from 74 units to 26 units per week, with no additional benefit from the second counselling session. The evidence shows that general hospitals should consider implementing screening and brief interventions for hospital inpatients with excess alcohol consumption.

Impact of treatment

Before treatment the alcoholic patient's use of healthcare services is up to 15 times greater than the general population, their healthcare costs increase over time, but after alcohol treatment these costs decline significantly.^{59–63}

Brief interventions have shown, not only reductions in alcohol consumption but also, reductions in alcohol related harm including alcohol related injury drink driving, and social consequences (for example, relationship problems,

Box 5 Brief interventions

- F, feedback about personal risk or impairment
- R, responsibility = emphasis on personal responsibility for change
- A, advice to cut down or, if indicated because of severe dependence or harm, to abstain
- M, menu of alternative options for changing drinking pattern
- E, empathic interviewing
- S, self efficacy—an interview style that increases this

traffic violations). Gentilello *et al* at three years follow up showed the intervention group still had a 48% reduction in injuries requiring hospital admission.⁶⁴

Staff and barriers to treatment

A key reason for failure to refer patients for alcohol treatment is a negative attitude regarding treatment effectiveness, because of their frequent exposure to patients who continue to drink.⁶⁵

Research suggests that nurses have a more positive view about the preventative role of A&E departments than doctors.¹⁷ Doctors tend to focus on the presenting illness and not the underlying problem.⁶⁶ They also felt questions about alcohol may be intrusive, preferring not to screen for alcohol consumption¹⁷ despite it being a recommendation.⁶⁷ Among other reasons for not referring are lack of time and resources, not within their remit,^{17 68} and patient behaviour and aggression.¹⁷

These barriers support the case for assigning alcohol liaison workers, within the general hospital, to educate and support staff, facilitate referral to specialist drug and alcohol services, and deliver the brief interventions.^{68–70} Non-professionals such as community outreach workers and health promotion advocates have been successfully trained to screen and intervene with patients with alcohol problems.⁷¹

LEGAL ISSUES

A common problem in managing drunk patients in A&E patients is how to deal with disturbed and antisocial behaviour. A decision also needs to be made about a person's ability to consent to treatment. Patients will normally have attended the department because of concern about possible illness or more commonly, as we have reviewed, because of trauma. The difficulty is in weighing the needs and rights of the patient against those of the staff.⁷²

The general principle is that adults have the right to make decisions about their health treatment. In common law every adult has the right and capacity to decide whether or not to accept medical treatment. This capacity may vary over time in conditions such as dementia, confusional states (delirium), and mental illness.

This principle is dependent on the person having "capacity". The concept of capacity is that a person is able to understand and retain information that is material to the decision that they are being asked to consider. They have to be given information about the probable consequences of having or not having the treatment in question. They must have the mental ability to use this information and weigh it up in coming to a decision. It is important to recognise that patients may have capacity in one area but not in another. A patient who is drunk will almost by definition have some interference in his normal level of higher mental functioning. This does not necessarily mean that the patient does not have capacity in all areas and for all treatments. The decision about a patient's capacity is for the doctor to make and they must consider whether the patient has necessary capacity to make each decision at that time. The doctor must consider how much information is appropriate for that particular decision and maximise the patient's potential to make a decision. In the case of a drunk patient the doctor should be satisfied that the patient has capacity to consent to the treatment that is being carried out. These issues also relate to the issues of allowing a patient to leave the hospital if there is concern about their safety and welfare.

There will clearly be situations in which drunken patients lack capacity. The treatment of patients in these circumstances depends upon a number of common law principles. The first of these is a general principle for doctors to act in the "best interests" of patients. Healthcare professionals can and

should provide treatment without consent for people who lack capacity, if it is considered clinically necessary and in the best interests of the patient. The only circumstance in which this is not the case (and unlikely to be an issue in drunkenness) is when the patient has made a valid "advance directive".

The second common law principle is that of "necessity" in situations where action is required to assist a person without consent. This would be in emergency situations; restraining very disturbed patients, patients about to jump out of windows, serious bleeding, etc. It is recognised that it is imperative to act quickly in these situations before capacity can be established.

The third principle in common law is that of a "duty of care" on all professional staff to patients in a hospital. Staff may be negligent by omission if they do not act in caring for patients. There is a US report where this occurred.⁷³ Hospitals and managers have a similar "duty of care" in providing resources and environment to reasonably ensure that patients can be treated.

The use of compulsory detention and treatment using the Mental Health Act is rarely of use in such situations. The treatment of alcohol misuse is exempt from the act, which also only generally applies to the treatment of psychiatric illness and so is not helpful in permitting treatment for physical illness or injury.

In clinical practice a medical decision will have to be made weighing up the intoxicated patient's rights to give consent for treatment taking into account their best interests, the necessity of intervention, and our duty of care to all patients in hospital. The additional factor in patients who are drunk may be aggressive or violent behaviour. In general such behaviour is unacceptable and in principle can be managed as such behaviour would be in other settings. This would include use of the police and the criminal justice system. This may be appropriate in patients who have sustained none or minor injuries. The patient could be removed to a police station where they could be assessed by a police surgeon. The problem arises in patients in whom there is evidence of more serious injury or illness and investigations and treatment are required. The decision as to whether treatment should be refused would again depend on a weighing of the balance between the patient's behaviour and their perceived best interests and the necessity of such treatment. This is often difficult and there would be concern about the possibility of missing serious illness or injury in such patients.

It is essential that there are guidelines for the management of all disturbed patients in A&E departments. If drunken patients are going to be assessed for treatment then staff must ensure that they do not place themselves at risk of harm. The presence of security staff and environment are necessary and form part of the "duty of care" that the hospital has towards its staff.

Conclusion

Drunken patients require careful assessment and treatment, although they can present challenges to all members of staff, evidence shows that a presentation within the general hospital is a "teachable moment". Intervention at this critical time, even brief, can bring about lasting improvements not only for the patient but also society. This opportunity is often missed; staff require more support and training in managing these people and the use of screening and brief interventions that have been shown to be effective.

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